

WHAT IS CLAIMED IS:

1. A trigger mechanism for initiating a phase change in a variable liquid element comprising:

- a) a variable liquid element enclosed in a container having at least one wall;
- b) an activation material located external to the wall of the container;
- c) at least one perforation in the container wall;
- d) a movable barrier means for bringing the activation material into contact with the perforation;

wherein the movable barrier means isolates the activation material from the perforation so that the phase change in the variable liquid element is not activated until the movable barrier means is initiated by a user.

2. The trigger mechanism of Claim 1 wherein the movable barrier means further comprises a folded tab wherein the activation material is printed, coated, sprayed, or any combination thereof, onto the folded tab; the folded tab is externally connected to the container over the perforation and the folded tab isolates the activation material from the perforation.

3. A trigger mechanism of Claim 1 wherein the container further contains a product, and wherein the phase change in the variable liquid element provides a temperature change to the product.

4. A trigger mechanism of Claim 1 wherein the variable liquid element is a supercooled salt solution.

5. A trigger mechanism of Claim 1 wherein the perforation is a puncture, a hole, a slit, a crack, a crevice, or any combination thereof.

6. A trigger mechanism for initiating a phase change in a variable liquid element comprising an activation material printed, coated, sprayed, or any combination thereof onto a folded tab, the folded tab being externally connected to a container having at least one wall with at least one perforation in the wall, the container further enclosing a variable liquid element, wherein the activation material is isolated from the perforation by the folded tab until the folded tab is activated by the user thereby bringing the activation material into contact with the perforation and initiating a phase change the variable liquid element.
7. The trigger mechanism of Claim 5 wherein the variable liquid element is a supercooled salt solution.
8. The trigger mechanism of Claims 6 wherein the container further contains a product, and wherein the phase change in the variable liquid element provides a temperature change to the product.